

Database Normalization #7

Let us take the example of a simple movie library. Each movie has a description, director, and serial number. Customers have a name, address, and membership number. Assume only one copy of each movie exists in the library. We are given the following relations and determinants:

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Relations:
movie (DESCRIPTION, serialno)
serial (SERIALNO, director)
customer (name, addr, MEMBERNO)
borrow (memberno, DATE, SERIALNO)
```

```
Determinants:
description->director, serialno
serialno->description
serialno->director
name, addr -> memberno
memberno -> name, addr
serialno, date -> memberno
```

The above relation is in **x**NF form** where **x** may take the following values {1,2,3,3.5} corresponding to {1NF, 2NF, 3NF and BCNF} respectively.

What is the maximum possible value of **x such that the above relation satisfies the *x*NF form? Your answer should only be restricted to one of these numbers:1/2/3/3.5 Do not leave any leading or trailing spaces.